

THE KNIFE WEEDER

Patented by
H. D. CLAYTON,
Hill City, Kansas

The Knife Weeder has been in use by the farmers of Graham county for a number of years.

It is made to take one row, or two rows, or three rows, the first time over, on all crops planted with the lister.

It is all steel and iron, except the connecting plank.

It is the lightest weeder made, and also the strongest, built to last a lifetime.

It pulls lighter than any other kind of a weeder.

The knives can be adjusted to any desired position.

The knives can be reversed, doubling their usefulness.

The connecting plank rests on rollers, at both ends, reducing the side friction.

The weight of the driver can be shifted to suit conditions.

The steel runners are easily replaced, if they should ever wear out.

The "V" hitch controls the machine perfectly.

Its open construction gives it light weight.

Its complete system of bracing makes it extra strong.

The knives can be kept sharp cheaper than you can buy oil and grease for wheels and discs.

It has no boxings nor spindles to wear out.

It does away with costly repair bills.

It will get the weeds at any stage of their growth.

It does perfect work in heavy weeds that no other weeder can handle.

It leaves the ground in the best of condition for any succeeding cultivation.

It does not throw the soil away from the corn.

It does not pitch the dirt up to center of the ridge, and make your horses lame to walk on it the next time over.

It does not roll the dirt over and over, to lose its moisture in a dry time.

It leaves the row in better shape and the ridge in better shape, than any other machine made.

It is not only a weeder, but a cultivator as well. Even if you have no weeds, it will do better work "the first time over" than any other machine.

It is the right thing in the right place for "the first time over" in all listed crops.

It was invented by a Graham county farmer and a small factory, equipped with special machinery, is making them at Hill City.

It is manufactured and sold by H. D. Clayton, Hill City, Kansas. Write for prices and further information.

K. Gnaggy, of Lucerne, Kan., traded off his two John Deere weeders and replaced them with two double-row Knife Weeders in the spring of 1918. He says that he formerly used knife weeders, before he bought the disc machines; and, after having experience with both kinds, he knows that he can be more successful with his listed crops by using the Knife Weeder.

Every farmer who owns a lister needs a good Knife Weeder. They are sold by H. D. Clayton, Hill City, Kansas, and are made to take one row, two rows or three rows.

The Knife Weeder succeeds where others fail.

The Knife Weeder gets the weeds—big or little.

The Knife Weeder is the cheapest and the best.

The Knife Weeder gets the weeds—all the weeds.

The Knife Weeder makes more bushels to the acre.

The Knife Weeder first, then the harrow, for all listed crops.

The Knife Weeder is the greatest moisture saver ever invented.

The Knife Weeder loosens the surface and saves the moisture.

Two Knife Weeders (two-row) can easily be hauled in a Ford car.

The Knife Weeder will last a lifetime with no repairs to speak of.

The Knife Weeder always sells well at a sale, no matter how old it is.

The Knife Weeder costs less and is worth more than any other weeder.

The Knife Weeder is the best and cheapest machine ever put into a corn field.

The Knife Weeder leaves the soil in fine shape for the harrow, or any other tool.

The Knife Weeder makes more corn to the row, more corn to the acre, more corn in the crib.

It will pay to make a special trip to Hill City to see the new improvements in Knife Weeders.

The Knife Weeder is made for the man who wants the best, as well as the man who wants the cheapest.

The Knife Weeder cuts the capillary attraction in the soil and prevents the moisture from escaping.

The Knife Weeder is not only the cheapest machine on the market, but it does the work better than any other machine made.

The Knife Weeder is the lightest running, and the cheapest, fastest and best machine for all listed crops. Ask the man who has one.

The Knife Weeder works side by side with any other weeder, and proves it's worth more, by making more corn to the acre.

The man who makes the Knife Weeder makes one fixed profit on each machine. The man who buys it makes a bigger profit on it every day he uses it.

The Knife Weeder is hitched closer to the team than any other machine on the farm. This means light draft and close work at the ends of the rows.

At the Weeder Factory in Hill City, is an old Knife Weeder that was used for fifteen years. The knives are worn out, but the rest of the machine is good for another fifteen years.

During the dry summer of 1917, it was easy to see that the Knife Weeder is the greatest moisture saver ever put into a corn field. It kept the fields green longer than any of the fields gone over with any other weeder.

THE IMPROVED KNIFE WEEDER
(Patented by H. D. Clayton, Hill City, Kansas.)

The Improved Knife Weeder has never been equalled for saving moisture and killing weeds. It is the cheapest, fastest, and best machine for cultivating all listed crops. It is light running, easily adjusted for all the various conditions of field work, and guaranteed to be strong enough, in every part, to stand any strain, usual or unusual, that may be put upon it in any field that has been planted with a lister. Made for one row, two rows and three rows. Rigged for two, four and six horses. Strongly endorsed by the Fort Hays Experiment Station. Every farmer who owns a lister needs this machine. No other equals it for saving moisture and killing weeds.

THE WEEDER FACTORY,
Hill City, Kansas.

Prices for Season of 1919

One row machine, complete with two long knives (4-foot) and two short knives (14-inch) and eveners for two horses, \$27.00. If eveners are not wanted deduct \$2.00. For 4 1/2-foot knives, instead of 4-foot, add \$1.00. For 5-foot knives add \$2.00.

Two-row machine, complete with four long knives (4-foot) and four short knives (14-inch) and eveners for four horses \$54.00. If eveners are not wanted, deduct \$4.00. For 4 1/2-foot knives, instead of 4-foot, add \$2.00. For 5-foot knives add \$4.00. For automatic centering attachment on seat frame add \$5.00. For double lever control on seat frame, instead of the automatic centering attachment, add \$10.00.

Three-row machine for four horses, complete with six long knives (3-foot) and six short knives (14-inch) and eveners for four horses, \$81.00. If eveners are not wanted, deduct \$6.00. For 4-foot knives, instead of 3-foot, add \$6.00.

Three-row machine for six horses, complete with six long knives (4-foot) and six short knives (14-inch) and eveners for six horses, \$88.00. If eveners are not wanted deduct \$6.00. For 4 1/2-foot knives, instead of 4-foot, add \$3.00. For 5-foot knives add \$6.00. Centering attachments are not necessary on three-row machines.

Extra knives, both long and short, will be furnished for \$1.00 per foot. They are all well made out of the very best grade of open-heath plow steel. It does not pay to use cheap material for this purpose. 4 1/2-foot knives are recommended for average work on all machines, except the three-row machine for four horses. This machine takes its three rows right together, and is only designed to cut the shoulder without going through the ridge. For this kind of work, it is an easy four-horse load, and knives from three to four feet long are all that is necessary. On all the other machines 4-foot knives work well under favorable conditions, the 4 1/2-foot knives under average conditions, and the 5-foot knives under bad conditions, such as heavy trash and sticky soil.

Owing to the very uncertain steel situation, all prices are subject to change without notice. It is safer to write for prices before ordering.

The shipping weight of the one-row machine is 100 pounds, the two-row 250 pounds and the three-row 350 pounds. Your depot agent will tell you what the freight will be from Hill City to your shipping point.

Prices are F. O. B. Hill City, and cash must accompany all orders, which will be filled as promptly as possible, in the order in which they are received.

KANSAS STATE AGRICULTURAL COLLEGE AND UNITED STATES
DEPARTMENT OF AGRICULTURE CO-OPERATING
DIVISION OF EXTENSION
COUNTY AGENT WORK

CO-OPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF KANSAS
SCOTT CITY

January 17, 1918.

Mr. H. D. Clayton,
Hill City, Kansas.

My Dear Mr. Clayton:—

I am pleased to get the nice long clipping which is good descriptive matter on operating the knife weeder. We used your machine very successfully last year as a one-row machine and two parties borrowed it and used it as a two-row machine. In either style it makes friends for itself and certainly does nice work. One of these men said that it handled weeds much larger than he had been able to handle with any of his other machines.

We shall try to have it in service where it will do the most good possible the coming year.

Yours very truly,

P. E. Crabtree
District Agricultural Agent.

FORT HAYS EXPERIMENT STATION

Branch of the
KANSAS STATE AGRICULTURAL COLLEGE
CHAS. R. WEEKS, Superintendent
HAYS, KANSAS

August 3, 1918.

Mr. H. D. Clayton,
Hill City, Kansas.

Dear Mr. Clayton:

Your good letter of the 23rd at hand explaining the price of knives, which is satisfactory. The little machine certainly did good work here on the Station, getting weeds that we could not get with anything else. It is not often we have very many weeds in our field, but this year, on some pieces that were listed very early, and then we were delayed on account of rains, and had to plant some over after these rains, it was necessary to use your good weeder to clean up the field. Later I will give you a report and possibly send you some pictures.

Very truly yours,

Chas. R. Weeks
CRW-AC Superintendent.

THE NORTH SIDE HARDWARE

H. D. CLAYTON, Proprietor

Hill City, Kansas, August 6, 1918.

Mr. Chas. R. Weeks, Supt.,
Hays, Kansas

Dear Mr. Weeks:—I have your kind letter of the 3rd and was glad to hear from you, and to know that the little weeder you bought of me did you so much good this season. But, Mr. Weeks, you have demonstrated only a part of its usefulness. You have seen it do a good job of killing weeds. It will do more than that. It saves moisture in the soil by cutting the capillary attraction and leaving a thin loose layer of earth in the row and on the ridge. It is the best machine to use for the first time over, on all listed crops, even if there are no weeds in the field.

I would suggest that next spring you try the experiment on twenty rows, ten with the knife weeder and ten with the disc weeder or any other tool. From time to time measure the moisture content in each plot. You will observe that the dryer the weather becomes the more marked will be the difference in the moisture content of the two plots. Hundreds of fields in this county have demonstrated that crops always stand the dry weather better after the knife weeder than after any other tool, when used for the first cultivation.

You can run the lister in the winter, or early spring, and plant whenever the right time comes, knowing that the knife weeder will take care of the shoulder and the ridge, thoroughly eliminating all weed growth there. The planting operation will keep down the weed growth in the row.

I shall be pleased to receive the report you mention, and the pictures. If you and I have discovered something that is good, then we should do what we can to let the public know about it, and to give the reasons why.

Very truly yours,

H. D. Clayton

DIRECTIONS FOR OPERATING THE KNIFE WEEDER

(Patented by H. D. Clayton, Hill City, Kansas.)

The long knife goes under the gas pipe, with a bolt through the end of the knife and the gas pipe. Back edge of knife slips in between the two lower castings, and is clamped there, resting against the bolt. To make the knife cut wide or narrow, slip the castings forward or back on gas pipe and knife. To give the knife more or less suction, loosen bolt in end of knife and loosen clamps on gas pipe. Then put knife in the position you want it and tighten the clamps. When you have the knife securely clamped in position, then tighten the bolt in the end of the knife. Either end of the knife can be raised or lowered by sliding the gas pipe up or down on the posts that it is bolted to. Front end of knife always gets dull first, and when it does, you can reverse ends and sides, making the knife give double service and last twice as long. In very deep listing and very high ridges, put the knife on top of the gas pipe. You can do this by taking the castings off and putting them on the other way, with the longest casting on top of the gas pipe, instead of below. Under some conditions, it may be advisable to put one or both ends of gas pipe inside of posts, instead of outside, using the little bolt castings on the other side of the post. In using beveled knife, put the beveled side down, especially in trashy ground. Trash will clear better with back end running low. Tell the blacksmith to leave your knives straight, and bevel both sides alike. Then turn your knives over frequently, and they will have a tendency to sharpen themselves, and also become polished on both sides. A smooth edge for trash and a rough edge for big, heavy weeds. Run the long knives as high as you can, and the short knives as low as you can.

The short knives go under the runner at the back end, or under the runner at the two holes just back of the middle post. Use the back position, unless the dirt is covering up the plants. If the plants are very small, use the forward position, which gives you a fender to keep the dirt away from the plants. Most short knives are provided with extra holes to adjust for width of cut. They are generally provided with an upward turn at the back end, so they will throw dirt to the plants. The quantity of dirt they will throw depends on the size and shape of these turns. You can heat them red hot and change them to suit conditions. They will stand considerable hammering cold. Hammer them out straight, or nearly straight, if they throw too much dirt. It is well to have an extra set or two of the different kinds, to be used for different kinds of work. The short knives are made in several different sizes and styles, and the long knives in lengths varying from three feet to five. The standard short knife is fourteen inches, and the standard long knife is four feet, which is about right for rows planted with a fourteen-inch lister forty-inches apart.

When you want to use the machine for the second time over, the runners should be set further apart.

The hitch can be shortened by dropping off a link or two.

On the one-row machine, the seat may be shifted forward or back, the seat brace being made in two pieces so that it can be lengthened or shortened. If you want to raise the hitch, put hitch bar on top of runners.

On the two-row machine, and also the three-row, the roller frame is fastened to top of sled with clamps, so that it may be shifted forward or back on top of the runners, to put the driver's weight toward the front or toward the back, as may be desired. This is a very important adjustment, and has much to do with making the machine run light and do good work. If front end of runner is digging into the ground, then the roller frame is too far forward. If front end of runner does not touch the ground, then the roller frame is too far back.

On the three-row machine for four horses, it may be converted into a two-row machine by taking out the middle sled. You can use the same connecting plank by bolting a short piece across the hinge, and, instead of using the regular four-horse eveners that come with this machine, hitch a team direct to each sled with an ordinary two-horse evenner. The middle sled may easily be converted into a one-row machine.

On the three-row machine for six horses, we hitch a team direct to each sled with an ordinary two-horse evenner, and skip every other row, same as with the two-row machine. The hinged connecting plank takes care of uneven ground.

Any of the sleds may be taken out of any of the machines and used as one-row machines.

You can run the long knives further back by removing the fenders and attaching the gas pipes to the rear posts, instead of the front ones.

Study all of the adjustments carefully, and make the machine fit your work.

If Your Dealer Does Not
Handle the
**Improved Knife
Weeder,**
You Can Order One Direct From the
Factory at Hill City, Kansas